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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/712,381	11/14/2003	Hayato Nakanishi	117643	9594

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EXAMINER

LAO, LUN YI

ART UNIT PAPER NUMBER

2629

DATE MAILED: 10/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,381

Applicant(s)

NAKANISHI, HAYATO

Examiner

LUN-YI LAO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 11-20, 23-29, 32 and 33 is/are pending in the application.
- 4a) Of the above claim(s) 8-10, 21, 22, 30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11-20, 23-29, 32 and 33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/14/2003 and 4/3/2006.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species I, Figures 1-4, 7 and 8(claims 1-7, 11-20, 23-29, 32 and 33) in the reply filed on July 27, 2006 is acknowledged. The traversal is on the ground(s) that the subject matter of all species is sufficiently related that a thorough search for the subject matter of any one species would encompass a search for the subject matter of the remaining species. Thus, it is respectfully submitted that the search and examination of the entire application could be made without serious burden. This is not found persuasive because Species I and Species II are independent or distinct for each other(see figures 3 and 5) and there would be a serious burden on the examiner if restriction is not required because the Species have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

The requirement is still deemed proper and is therefore made FINAL.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the first effective optical regions or the second effective optical regions not arranged so as to be adjacent

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to each other" cited in claim 4 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "the first effective optical regions or the second effective optical regions not arranged so as to be adjacent to each other" in claim 4 is confusing since the ineffective optical region is sandwiched by tow of the first effective optical regions and tow of the second effective optical regions(see claim 2 and figure 2).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5, 14-18, 25-27, 32 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Wright et al(5,831,699).

As to claims 1-3, 5, 14-18, 25-27, 32 and 33, Wright et al teach an electro-optical device comprising: a substrate(30)(see figure 1; abstract and column 6, lines 27-50); a plurality of effective optical regions(24-27) provided above the substrate(30); electro-optical elements(LEDs) provided in the effective optical regions(24-27); a wiring region(34-37) provided on the substrate(30), wires to supply power or electric signals to the electro-optical elements(LEDs or LCD) being provided in the wiring region(34-37);

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and at least three of the effective optical regions(24-27) are in contact with ineffective-optical regions(34-37) directly or via part of the wiring region, the electro-optical elements(LEDs or LCD) not provided in the ineffective-optical regions(34-37)(see figures 1-5; abstract; column 6, lines 10-50; column 7, lines 26-67; column 8, lines 1-24 and lines 38-68 and column 9, lines 1-39).

As to claims 2-3, Wright teaches the plurality of effective optical regions(34-37) further comprising: a plurality of first effective optical regions(24, 27) in which first electro-optical elements(24, 27) are provided; a plurality of second effective optical regions(25, 26) in which second electro-optical elements(25, 26) are provided, and the ineffective optical region(34-37) being arranged so as to be sandwiched by two of the first effective optical regions(24, 27) and so as to be sandwiched by two of the second effective optical regions(25, 26)(see figures 1-5; abstract and column 7, lines 25-49).

As to claims 5 and 18, Wright teaches the first effective optical regions(24, 27) and the second effective optical regions(25, 26) having the same shape(see figures 1 and 3).

As to claims 14, 15 and 25, Wright teaches each of the first electro-optical elements and the second electro-optical elements being an electroluminescent element having a light-emitting layer that includes organic material(see column 6, lines 27-50).

As to claim 17, Wright teaches the first light-emitting films(24, 27) or the second light-emitting films(25, 26) are arranged to not be adjacent to each other(see figure 1).

As to claims 32 and 33, Wright teach an electro-optical device(LED display) and active matrix substrate(see figures 1-2; abstract and column 6, lines 27-56).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright et al in view of Arnold et al(US 20040036421A).

As to claims 6, 19 and 28, Wright fail to disclose the ineffective optical regions having anti-reflection members.

Arnold et al teach the ineffective optical regions having anti-reflection members(light-absorbing electrodes)(see paragraph 97). It would have been obvious to have modified Wright et al with the teaching of Arnold et al, since Wright et al teach reflective electrodes could be replaced by light-absorbing electrodes(or antireflection coating) and to enhance the optical effects on a display(see paragraph 97).

9. Claims 4, 7, 11-12, 20, 23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright et al in view of Mikami et al(6,661,397).

As to claims 4, 7, 11-12, 20, 23 and 29, Wright et al fail to disclose the first effective optical regions or the second effective optical regions not arranged so as to be adjacent to each other and the first and second effective optical regions having respective electronic circuits to drive the electro-optical elements.

Mikami et al teach the first effective optical regions or the second effective optical regions adjacent to each other(see figure 5) and the first and second effective optical regions(1) having respective electronic circuits(9) to drive the electro-optical elements(8) provided in the first and second effective optical regions(1)(see figures 1, 4-5, 7 and column 3, lines 18-33). It would have been obvious to have modified Wright et al with the teaching of Mikami et al, so as to reduce power consumption of the circuit of the display and increase the resolution of the display(see abstract and column 2, lines 6-33).

As to claim 11, Wright as modified teach pixels provided so as to correspond to respective intersections of a plurality of scan lines and a plurality of data lines, the electronic circuits driving the electro-optical elements in accordance with scan signals from the scan lines and data signals from the data lines(see Wright's figure 2 and Mikami et al's figure 5 and column 4, lines 55-64).

As to claim 12, Mikami et al teach the electronic circuits comprising: first transistors(3) to supply data signals during electrical conduction; capacitance elements(45) store, as an amount of charge, the data signals supplied from the first transistors; and second transistors(43) to supply an amount of current corresponding to the electrical-conduction state to the electro-optical elements(8), the electrical-conduction state being controlled in accordance with the amount of charge stored by the capacitance elements(45)(see figure 7; column 5, lines 25-68 and column 6, lines 1-23).

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10. Claims 13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wright et al in view of Yokono et al(4,773,737).

As to claims 13 and 24, Wright fails to disclose the first and second electro-optical elements from green, blue or red colors.

Yokono et al teaches the first and second electro-optical elements(4) from green, blue or red colors(see figures 1, 5 and column 1, lines 30-46). It would have been obvious to have modified Wright with the teaching of Yokono et al, so as to provide a color display and the desirable high image quality to a user(see column 2, lines 39-44).

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Siwinski(7,012,588) teaches an LED display with R, G, B colors.

Kanauchi et al(6,788,277) teach an LED display having an active region and non-active region(see figure 15).

Akimoto et al(6,950,081) teach a display having an active region and non-active region.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi Lao whose telephone number is 571-272-7671.

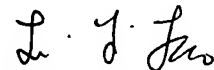
The examiner can normally be reached on M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 12, 2006



Lun-yi Lao

Primary Examiner